AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Previously Presented) A method, comprising:

providing a plurality of first stage switches;

providing a plurality of second stage switches coupled to each of the plurality of first stage switches, wherein the plurality of second stage switches are coupled to each of the plurality of first stage switches to form a CLOS network;

providing a plurality of sources coupled to the CLOS network;

providing a plurality of destinations coupled to the CLOS network;

calculating a plurality of routing trees, each routing tree comprising the plurality of switches;

calculating a plurality of Destination Location Identifiers (DLID) and a set of forwarding instructions for each of the plurality of first stage and second stage switches, wherein each of the plurality of DLIDs corresponds to one of the plurality of routing trees and one of the plurality of destinations; and

populating a forwarding table of each of the plurality of first stage and second stage switches in the CLOS network with the plurality of DLIDs and the set of forwarding instructions and wherein the forwarding instructions create a path between each of the plurality of sources and each of the plurality of destinations to make the CLOS network operate as a strictly non-interfering network.

2. (Original) The method of claim 1, wherein each of the plurality of destinations is identified by a BaseLID.

3. (Previously Presented) The method of claim 1, wherein each of the plurality of second stage switches comprises a spine node, and wherein calculating the plurality of routing trees comprises, for each spine node in the CLOS network, calculating a first_shortest path from each spine node to each of the plurality of sources and each of the plurality of destinations.

4. (Previously Presented) The method of claim 1, wherein each of the plurality of second stage switches comprises a spine node, and wherein each of the plurality of routing trees comprises a plurality of links that form a second shortest path from one of the plurality of sources or one of the plurality of destinations to each spine.

5. (Previously Presented) The method of claim 1, further comprising:

creating a packet at one of the plurality of sources, wherein the packet is addressed to one of the plurality of destinations;

executing a rearrangement algorithm for the CLOS network;

assigning one of the plurality of DLIDs to the packet; and

the packet following a path from the one of the plurality of sources, through one of the plurality of first stages switches and one of the plurality of second stage switches, to the one of the plurality of destinations, wherein the one of the plurality of first stage switches and the one of the plurality of second stage switches forward the packet according to the one of the plurality of DLIDs assigned to the packet.

6. (Cancelled).

7. (Previously Presented) The method of claim 5, wherein the packet following the path comprises looking up the one of the plurality of DLIDs assigned to the packet in the forwarding table in the one of the plurality of first stage switches and in the one of the plurality of second stage switches along the path from the one of the plurality of sources to the one of the plurality of destinations.

8. (Original) The method of claim 5, wherein calculating the plurality of routing trees comprises calculating the plurality of routing trees sufficient to execute the rearrangement algorithm.

9. (Previously Presented) The method of claim 5, wherein the packet following the path comprises the one of the plurality of first stage switches and the one of the plurality of second stage switches forwarding the packet in accordance with the one of the plurality of DLIDs assigned to the packet as found in the forwarding table in the one of the plurality of first stage switches and in the one of the plurality of second stage switches.

10. (Previously Presented) A method, comprising:

providing a plurality of first stage switches and a plurality of second stage switches coupling a plurality end nodes to one another to form a network, the plurality of second stage switches coupled to each of the plurality of first stage switches;

calculating a plurality of routing trees comprising the plurality of first stage switches and one of the plurality of second stage switches;

calculating a plurality of Destination Location Identifiers (DLID) and a set of forwarding instructions for each of the plurality of first stage and second stage switches, wherein each of the plurality of DLIDs corresponds to one of the plurality of routing trees and one of the plurality of end nodes; and

populating a forwarding table of each of the plurality of first stage and second stage switches with the plurality of DLIDs and the set of forwarding instructions and wherein the forwarding instructions create a path between each of the plurality of end nodes that enables the network operate as a strictly non-interfering network.

11. (Previously Presented) The method of claim 10, wherein the network is a CLOS network.

12. (Original) The method of claim 10, wherein each of the plurality of end nodes comprises a destination, and wherein the destination is identified by a BaseLID.

13. (Previously Presented) The method of claim 10, wherein each of the plurality of second stage switches comprises a spine node, and wherein calculating the plurality of routing trees comprises, for each spine node in the network, calculating a shortest path from each spine node to each of the plurality of end nodes.

14. (Previously Presented) The method of claim 10, wherein each of the plurality of second stage switches comprises a spine node, and wherein each of the plurality of routing trees comprises a plurality of links that form a shortest path from each of the plurality of end nodes to each spine node.

15. (Previously Presented) The method of claim 14, wherein each shortest path is loop-less.

16. (Cancelled).

17. (Previously Presented) A method, comprising:

providing a plurality of first stage switches and a plurality of second stage switches coupling a plurality destinations to a plurality of destinations to form a CLOS network, the plurality of second stage switches coupled to each of the plurality of first stage switches;

creating a packet at one of the plurality of sources, wherein the packet is addressed to one of the plurality of destinations;

executing a rearrangement algorithm for the CLOS network;

assigning one of a plurality of Destination Location Identifiers (DLIDs) to the packet; and

the packet following a path from the one of the plurality of sources, through one of the plurality of first stage switches and one of the plurality of second stage switches, to the one of the plurality of the destinations, wherein the one of the plurality of first stage switches and the one of the plurality of second stage switches forward the packet according to the one of the plurality of DLIDs assigned to the packet and wherein the path is part of the CLOS network operating as a strictly non-interfering network.

18. (Cancelled).

19. (Previously Presented) The method of claim 17, wherein the packet following the path comprises looking up the one of the plurality of DLIDs assigned to the packet in a forwarding table in the one of the plurality of first stage switches and in the one of the plurality of second stage switches along the path from the one of the plurality of source to the one of the plurality of destinations.

20. (Previously Presented) The method of claim 17, wherein the packet following the path comprises the one of the plurality of first stage switches and the one of the plurality of second stage switches forwarding the packet in accordance with the one of the plurality of DLIDs assigned to the packet as found in a forwarding table in the one of the plurality of first stage switches and in the one of the plurality of second stage switches.

21. (Previously Presented) The method of claim 1, wherein each of the plurality of first stage switches and each of the plurality of second stage switches is an INFINIBAND switch in compliance with an INFINIBAND Architecture Specification.

22. (Previously Presented) The method of claim 10, wherein each of the plurality of first stage switches and each of the plurality of second stage switches is an INFINIBAND switch in compliance with an INFINIBAND Architecture Specification.

23. (Previously Presented) The method of claim 17, wherein each of the plurality of first stage switches and each of the plurality of second stage switches is an INFINIBAND switch in compliance with an INFINIBAND Architecture Specification.

24. (Previously Presented) A method, comprising:

providing a plurality of first stage switches;

providing a plurality of second stage switches coupled to each of the plurality of first stage switches, wherein the plurality of second stage switches are coupled to each of the plurality of first stage switches to form a CLOS network;

providing a plurality of nodes coupled to the first stage switches and each operable to act as a source and a destination;

receiving requests indicating dynamic allocation of the plurality of nodes to a plurality of sources and a plurality of destinations in a predetermined time window;

calculating a plurality of routing trees, each routing tree comprising the plurality of switches;

calculating a plurality of Destination Location Identifiers (DLID) and a set of forwarding instructions for each of the plurality of first stage and second stage switches, wherein each of the plurality of DLIDs corresponds to one of the plurality of routing trees and one of the plurality of destinations; and

populating a forwarding table of each of the plurality of first stage and second stage switches in the CLOS network with the plurality of DLIDs and the set of forwarding instructions and wherein the forwarding instructions create a path between each of the plurality of sources and each of the plurality of destinations to make the CLOS network operate as a strictly non-interfering network.

25. (Previously Presented) The method of claim 24, wherein each of the plurality of destinations is identified by a BaseLID.

26. (Previously Presented) The method of claim 24, wherein each of the plurality of second stage switches comprises a spine node, and wherein calculating the plurality of routing trees comprises, for each spine node in the CLOS network, calculating a first_shortest path from each spine node to each of the plurality of sources and each of the plurality of destinations.

27. (Previously Presented) The method of claim 24, wherein each of the plurality of second stage switches comprises a spine node, and wherein each of the plurality of routing trees comprises a plurality of links that form a second shortest path from one of the plurality of sources or one of the plurality of destinations to each spine.

28. (Previously Presented) The method of claim 24, further comprising:

creating a packet at one of the plurality of sources, wherein the packet is addressed to one of the plurality of destinations;

executing a rearrangement algorithm for the CLOS network;

assigning one of the plurality of DLIDs to the packet; and

the packet following a path from the one of the plurality of sources, through one of the plurality of first stages switches and one of the plurality of second stage switches, to the one of the plurality of destinations, wherein the one_of the plurality of first stage switches and the one of the plurality of second stage switches forward the packet according to the one of the plurality of DLIDs assigned to the packet.

29. (Previously Presented) The method of claim 28, wherein the packet following the path comprises looking up the one of the plurality of DLIDs assigned to the packet in the forwarding table in the one of the plurality of first stage switches and in the one of the plurality of second stage switches along the path from the one of the plurality of sources to the one of the plurality of destinations.

30. (Previously Presented) The method of claim 28, wherein calculating the plurality of routing trees comprises calculating the plurality of routing trees sufficient to execute the rearrangement algorithm.

31. (Previously Presented) The method of claim 28, wherein the packet following the path comprises the one of the plurality of first stage switches and the one of the plurality of second stage switches forwarding the packet in accordance with the one of the plurality of DLIDs assigned to the packet as found in the forwarding table in the one of the plurality of first stage switches and in the one of the plurality of second stage switches.